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(54) Title: HEAT STABLE PHOTOCURABLE RESIN COMPOSITION FOR DRY FILM RESIST

$$R^{1} = \begin{bmatrix} & & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & \\ & & & \\ &$$

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(57) Abstract: The invention relates to a process for preparing a dry film resist by forming a photocurable resin composition onto a support film with a thickness of 1 to 50 µm and optionally laminate a protective film onto the photocurable composition layer to obtain a dry film resist; whereby the photocurable resin is formed from a homogeneous mixture comprising (a) from 20-90wt% of an alkaline soluble binder oligomer or polymer; (b) from 5 to 60wt% of one or more photopolymerizable monomers which are compatible with the oligomers and polymers of component (a); (c) from 0.01 to 20% by weight of one or more photoinitiators; (d) from 0 to 20% by weight of additives and/or assistants; and (e) from 0.1 to 10 % by weight of a leuco triphenylmethane dye of the formula (I), wherein R1 is a residue selected from (II), R2 is C1-C12 alkyl or phenyl which may be mono-, di- or tri-substituted by C1-C6 alkyl, trifluoromethyl, C1-6 alkoxy, C1-6 alkylthio, halogen and nitro; R3 is hydrogen or C1-C12 alkyl; R4 to R9 independently of one another are hydrogen or C1-C12 alkyl; X is O, S, NH or N-C1-C12-alkyl; (a) to (e) being 100% by weight. The above composition is useful to avoid unfavourable colour generation during the heat lamination.